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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,500	04/03/2006	Markus Dillinger	1454.1708	9191

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EXAMINER
RADONIC, NICOLA

ART UNIT	PAPER NUMBER
4192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/574,500	DILLINGER ET AL.
Office Action Summary	Examiner	Art Unit	
	NICOLA RADONIC	4192	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *03 April 2006*.

2a) ☐ This action is **FINAL**.　　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28* is/are pending in the application.

　　4a) Of the above claim(s) *1-14* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *15-28* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☒ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　Paper No(s)/Mail Date *4/3/2006 and 7/11/06*.

4) ☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

>   A person shall be entitled to a patent unless –
>
>   (b) the invention was patented or described in a printed publication in this or a
>   foreign country or in public use or on sale in this country, more than one year
>   prior to the date of application for patent in the United States.

2.   Claims 15-16, 19-24, 26-28 are rejected as being anticipated by prior art in
Prehofer[1].

3.   As per claim 15: "A radio system with at least one radiocommunication device" is
anticipated in the Prehofer abstract 'a group of mobile nodes in ad-hoc networks'.

4.   Further: "comprising: a reconfigurable radio interface" is anticipated in Prehofer
(introduction first paragraph and from page 400) 'In this paper, we consider the problem
of simultaneous reconfiguration of nodes in an ad-hoc network'.

5.   Further: "a first memory in which normal operation configuration information is
stored; a second memory in which error configuration information is stored" is
anticipated in Prehofer (page 401) 'The software is available at one node, e.g. by a
cellular connection from the Internet or locally via a IC/USIM card. Some nodes may
support both configurations'.

6.   Further: "a control unit configuring the reconfigurable radio interface" is
anticipated by Prehofer (Introduction) 'Change of radio layer. With software defined
radio technology, nodes can reconfigure to new radio technologies', where the term
'software' implies a processor, or 'control unit', to execute that software.

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[1] Prehofer et. al., "Synchronized Reconfiguration of a Group of
Mobile Nodes in Ad-Hoc Networks", IEEE, ICT 2003. 10th
International Conference on Telecommunications, Volume 1,
23 Feb. - 1 March 2003 Page(s):400 - 405, Digital Object
Identifier 10.1109/ICTEL.2003.1191266)

7.   Further: "an error detection device detecting an error of the reconfigurable radio
interface; and an error treatment device using the error configuration information to
provide error treatment so that the reconfigurable radio interface is reconfigured" is
anticipated by Prehofer (pages 401 and 402) where reconfiguration instructions 7 and 8
deal with successful and failed reconfiguration attempts and the fallback to the original
software condition in case of failure.

8.   As per claim 16: "A radio system in accordance with claim 15, wherein said radio
system is a mobile radio system" is anticipated in Prehofer, as against claim 15, and in
the Introduction which discusses 'mobile nodes'.

9.   As per claim 19: "A radio system in accordance with claim 15, wherein said
reconfigurable radio interface has radio characteristics predetermined in at least one of
the normal operation configuration information and the error configuration information" is
anticipated by Prehofer, as against claim 15, and on pages 401 and 402, where
reconfiguration instructions 7 and 8 deal with successful and failed reconfiguration
attempts and fallback to the original software condition in case of failure.

10.   As per claim 20: "A radio system in accordance with claim 15", is anticipated by
Prehofer, further: "wherein at least one of the normal operation configuration information
and the error configuration information contain at least some of the following radio
characteristics of the reconfigurable radio interface: a transmit power of the
radiocommunication device, a modulation method to be used within a framework of
radio communication, at least one frequency to be used within the framework of radio
communication, at least one frequency band to be used within the framework of radio
communication, and a communication protocol to be used within the framework of radio
communication" is rejected as being anticipated by Prehofer in his description of fall
back radio system attributes at the end of section 3.2 'Software radio configuration':
'software can be downloaded to change the radio layers of the nodes by SDR
technologies. In the case of failures (wrong radio frequency, wrong modulation type,
etc) nodes switch to previous radio standard and try to reestablish the connectivity'.

11.   As per claim 21: "A radiocommunication device" is taught by Prehofer as a 'mobile node' in the title of the article and throughout.

12.   Further: "associated with a processor providing error treatment" is anticipated by Prehofer in step 8 of the Reconfiguration Procedure (p. 402). The implied processor waits for 'positive indications' or 'no signal' conditions from the network to trigger software change over or to fall back to a previous software and radio configuration. Then if as described 'reconfiguration fails' the processor can 'send "fallback signal" repeatedly to all other reachable nodes' and provide the error treatment component described in the claim.

13.   Further: "comprising: a reconfigurable radio interface" is anticipated by Prehofer in the Introduction section 'Change radio layer', which describes the capability of changing radio layer parameters.

14.   Further: "a first memory in which normal operation configuration information is stored; a second memory, in which error configuration information is stored" is anticipated by Prehofer in the section 'Reconfiguration Procedure', (p 401), 'There are special fallback signals which can be sent by a node with the old configuration and are understood by nodes with new and preferably also by the old configuration'. The nodes store one or more configurations in local memory including the default fall back information.

15.   Further: "and a control unit configuring said reconfigurable radio interface on occurrence of an error to set up a communication connection to the processor providing error treatment using the error configuration information" is anticipated by Prehofer who discusses the mechanisms for reconfiguration and fallback to a default mode of operation in case of detected configuration errors, (p. 404), in section 3.2 'Software Radio Reconfiguration' as: 'In the case of failures (wrong radio frequency, wrong modulation type, etc) nodes switch to previous radio standard and try to reestablish the connectivity'. The 'nodes switch' phrase implies decision making by software, running on a processor, equivalent to the "control unit" in the claim.

16.   As per claim 22: "A radiocommunication device in accordance with claim 21, wherein said radiocommunication device is a mobile radiocommunication device" is rejected as being anticipated by Prehofer, as against claim 21, where he discusses mobile terminal reconfiguration as the topic of the paper.

17.   As per claim 23: "A radiocommunication device in accordance with claim 22, wherein said radiocommunication device is a mobile radio telephone." is rejected as being anticipated by Prehofer, as against claim 22, who discusses mobile communications and a cellular network within his article, implying telephone use.

18.   As per claim 24: "A radiocommunication device in accordance with claim 22, wherein said radiocommunication device is a mobile radio module." is rejected as being anticipated by Prehofer, as against claim 22, who discusses mobile radios, which includes the subcategory of mobile radio module by inference.

19.   As per claim 26: "A radiocommunication device in accordance with one of the claims 21, wherein said reconfigurable radio interface has radio characteristics given in at least one of the normal configuration information and the error configuration information" is rejected as being anticipated by Prehofer, as against claim 21, where the radio falls back to its default configuration in case of failure, (p. 404), section 3.2: 'Software radio reconfiguration'.

20.   As per claim 27: "A radiocommunication device in accordance with claim 26" is anticipated by Prehofer as against claim 26, further: "wherein at least one of the normal operation configuration information and the error configuration information contain at least some of the following radio characteristics of the reconfigurable radio interface: a transmit power of the radiocommunication device, a modulation method to be used within a framework of radio communication, at least one frequency to be used within the framework of radio communication, at least one frequency band to be used within the framework of radio communication, and a communication protocol to be used within the framework of radio communication" is rejected as being anticipated by Prehofer in his description of fall back radio system attributes at the end of section 3.2 'Software radio configuration': 'software can be downloaded to change the radio layers of the nodes by SDR technologies. In the case of failures (wrong radio frequency, wrong modulation type, etc) nodes switch to previous radio standard and try to reestablish the connectivity'.

21.   As per claim 28: "A method for modifying a reconfigurable radio interface of a radiocommunication device" is anticipated by Prehofer on page 401 in the section 'Reconfiguration Procedure', which discusses obtaining configuration information and configuring a mobile node (or radio device).

22.   Further: "comprising: detecting an error of the reconfigurable radio interface of the radiocommunication device" is also anticipated by Prehofer in the section 'Reconfiguration Procedure' (page 401+2) items 7 and 8 where communications messages are monitored until a 'timer' triggers the software to check for configuration failure internally and in other nodes.

23.   Further: "performing error treatment by a control unit using error configuration information stored in addition to the normal operation configuration information in the radiocommunication device; and configuring the reconfigurable radio interface in accordance with the configuration information" is rejected as being anticipated by Prehofer in the section 'Reconfiguration Procedure' (pages 401+2) items 7b + 8b, where he discusses 'fall back to the old software and communicate with the other nodes with the old configurations', implying storage of both old and new configurations. There is an implied processor or "control unit" to perform the algorithm and control the mobile node.

Claim Rejections - 35 USC § 103

24.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

25.   Claims 17, 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Prehofer as applied to claim 15 above, and further in view of Huilgol, US 6801762.

26.   As per claim 17: "A radio system in accordance with claim 16" is taught by
Prehofer, as discussed for claim 16 which references claim 15.

27.   Further: "wherein the error treatment device is integrated into an electronic chip
separate from said control unit" is not taught by Prehofer, but is obvious in light of
Huilgol.

28.   Huilgol teaches "wherein the error treatment device is integrated into an
electronic chip separate from said control unit" in 'The Background of Invention'
paragraph 11: 'Here, the determiner 54 is coupled to the receive circuitry 46 and is
operable to determine whether a connection between the mobile station 12 and the
emergency dispatch center has been completed'. It would have been obvious to
someone skilled in the art at the time of the invention to implement any error
determination in separate integrated circuits. The rational for this combination is
described by Huilgol as having separate logical control blocks.

29.   As per claim 18: "A radio system in accordance with claim 17" is taught by Prehofer as discussed for claims 17, 16, and 15, and Huilgol, as described against claim 17.

30.   Further "wherein the radiocommunication device includes an emergency call device that sets up an emergency call even if the radiocommunication device has a fault" is not taught by Prehofer, but is obvious in view of Huilgol.

31.   Huilgol teaches "wherein the radiocommunication device includes an emergency call device that sets up an emergency call even if the radiocommunication device has a fault" in 'Summary of Invention', paragraph 7, by discussing emergency operation across multiple communications systems: 'If, when an emergency call placed pursuant to a presently acquired communication system cannot be effectuated and, thereafter, the emergency call can also not be placed by way of a first alternate communication system, an attempt is thereafter made to place the emergency call by way of a second alternative communication system'. It would have been obvious to someone skilled in the art at the time of the invention to have combined the multiple system emergency operation in Huilgol with the reconfiguration ability in Prehofer. The rational for this combination is Huilgol's intended application of operating the radio across multiple alternative communication systems.

32.   As per claim 25: "A radiocommunication device in accordance with claim 21" is taught by Prehofer, as against claim 21.

33.   Further: "comprising an emergency call device that sets up an error-free emergency call communication connection even upon an error" is not taught by Prehofer, but is obvious in view of Huilgol.

34.   Huilgol teaches: "comprising an emergency call device that sets up an error-free emergency call communication connection even upon an error" in Summary of Invention paragraph 7: 'If, when an emergency call placed pursuant to a presently acquired communication system cannot be effectuated and, thereafter, the emergency call can also not be placed by way of a first alternate communication system, an attempt is thereafter made to place the emergency call by way of a second alternative communication system'. It would have been obvious to someone skilled in the art at the time of the invention to have combined the multiple system emergency operation in Huilgol with the reconfiguration ability in Prehofer. The rational for this combination is Huilgol's intended application of operating the radio across multiple alternative communication systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLA RADONIC whose telephone number is (571)270-5246. The examiner can normally be reached on IFW work schedule, with some Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NR
/Pankaj Kumar/
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